News Release

BASF's competence in plastic additives helps polymer products withstand harsh weather conditions

- **BASF launches new light stabilizers at K-Fair: Tinuvin® 880 and Tinuvin® XT 55**
- **New products for automotive interior parts and artificial turf**
- **Innovations and strong global footprint make BASF Plastic Additives a reliable and preferred partner to the industry**

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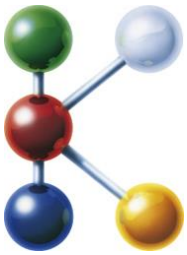
BASF at K 2016

Hall 5, booth C21/D21



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BASF Plastic Additives' core competence lies in light, thermal and process stabilization, allowing polymer producers and converters maximize plastics properties retention and extension. With Tinuvin® 880 and Tinuvin® XT 55, BASF launches the latest generation of light stabilizers at K 2016, the world's leading trade fair for plastics and rubber.

Automotive plastic parts are increasingly contributing to lightweighting, aesthetic appeal, comfort as well as providing various functional and structural benefits. Plastic elements and surfaces are expected to maintain their original material appearance and properties over the entire lifetime which is why tailored light stabilization becomes increasingly important to OEMs and formulators.

Novel plastics stabilization for automotive applications: Tinuvin 880 – a new Hindered Amine Light Stabilizer (HALS)

BASF offers a new generation of methylated HALS enabling formulators to optimize the long-lasting appearance and performance of various automotive interior parts. Tinuvin 880 provides unmatched intrinsic long-lasting UV resistance as well as a drastically improved

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thermal stability crucial for interior applications. It is also designed to improve secondary properties by eliminating defects such as mold deposit and surface stickiness, even in scratch-improved materials. As a unique 100% active substance, formulators are given entire freedom to accurately adjust parts performance properties as well as economics.

The main materials used in interior parts are polypropylene, other thermoplastic polyolefins and styrenics blends. They are used to produce instrument panels, door panels, consoles, glove boxes, trims and more. Plastics are gaining popularity in materials used to produce car parts due to their lightweighting advantage, design possibilities, and lower costs. Such plastics, however, are daily stressed by UV light and thermal aging, requiring tailor made stabilization and formulation flexibility.

With these intrinsic outstanding features to provide UV resistance in the long run, Tinuvin 880 is expected to become a leading candidate to improve the stabilization of exterior parts such as bumper, side cladding and rocker panel as well.

Novel plastics stabilization for artificial turfs: Tinuvin XT 55 – less impact of water carryover

Fibers and tapes used for numerous applications such as technical textiles for the construction industry like geo-textiles, roofing insulation, barrier structures as well as carpets, have to withstand harsh climate conditions, including prolonged exposure to UV light, fluctuating and elevated temperature, and environmental pollutants. Fibers and tapes often made of polyolefin obtain their resistance to aging by adding a Hindered Amine Light Stabilizer (HALS).

In addition to the mandatory light and thermal stability requirements, the converters are often faced with challenges of industrial manufacturing. The production of fibers and tapes with processing issues and production halts can lead to capacity reduction or potentially quality inconsistency.

An example is the manufacturing of polyethylene (PE) monofilaments for artificial turfs used to make sport floors or landscaping. The additives and colorants are usually added via a concentrated combi-batch and the filaments may be processed through a water bath. In the latter case, a phenomenon called water carryover is regularly experienced on the line leading to production disruption. To address this issue, BASF introduces Tinuvin XT 55, its latest generation of HALS for the film, fibers and tapes industry. Its primary application is polyethylene monofilaments and tapes. Tinuvin XT 55 is a high-performance light stabilizer that has very low contribution to water carryover enabling the production line to run without disruptions.

Tinuvin XT 55 also provides formulators with superior durability and excellent secondary properties such as color stability, gas fading and extraction resistance. In addition, excellent cost performance can be achieved with this new solution by adjusting dosage and other formulation components. Other applications can be considered, in particular, polyolefin monofilaments and tapes for shade nets, scaffolding, geo-textiles and big bags such as flexible intermediate bulk containers.

BASF works closely with customers on testing formulations prior to production scale-up to further improve the durability of plastic materials and develop innovative and sustainable solutions.

BASF’s light stabilization additives filter harmful UV light and act as free radical scavengers. This helps to avoid polymer degradation, maintain their appearance as well as their chemical and physical properties. For example, they are used in the interior and exterior of cars for protection against long-term exposure to sunlight and heat. In textiles, light stabilization additives are widely used to maintain the tenacity of synthetic fibers when exposed to thermal and UV aging while maintaining other secondary properties such as color retention. Agricultural plastics are another area where light stabilizers play an important role in protecting films from early degradation, due to simultaneous exposure to UV light, thermal stress and agricultural crop treatments.

BASF is a leading supplier of plastic additives with more than 50 years of experience. Its comprehensive and innovative product portfolio includes stabilizers which provide ease in processing, heat and light resistance to a variety of polymers and applications including molded articles, films, fibers, sheets and extruded profiles.

More information about additives:
http://www.plasticadditives.basf.com

BASF at K 2016

Where your ideas become ideal solutions: BASF at K fair from October 19-26, 2016 in Dusseldorf, Germany, in hall 5, booth C21/D21. You can find all related press releases, photos and further information here: basf.com/k2016.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 112,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into five segments: Chemicals, Performance Products, Functional Materials & Solutions, Agricultural Solutions and Oil & Gas. BASF generated sales of more than €70 billion in 2015. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (AN). Further information at www.basf.com.